

REVITALIZATION MASTER PLAN

Bryant Square

PREPARED FOR:



HOWARD COUNTY
DEPARTMENT OF
PLANNING AND ZONING

PREPARED BY:

URS

4 North Park Drive, Suite 300
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MAY 15, 2003





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Dear Citizens of Howard County:

The Howard County Department of Planning and Zoning and its Division of Environmental and Community Planning are pleased to present this Revitalization Master Plan for Bryant Square in the Village of Wilde Lake. We hope that it will be a valuable tool and resource for Bryant Square, as well as for other communities throughout Columbia and Howard County. Revitalization is a process for renewing older neighborhoods through the cooperative efforts of residents, community leaders, local businesses, and government officials.

In working with Bryant Square, a townhouse community that was developed nearly 30 years ago, we found that many communities are dealing with similar concerns: landscaping, lighting, sidewalk linkages, pathway and pedestrian improvements, graffiti removal, erosion and drainage, property maintenance and quality of life issues. This Revitalization Master Plan and an accompanying Landscape Maintenance Manual are intended to address these concerns.

This Master Plan, prepared by our consultant URS Corporation, was initiated as a cooperative effort between County agencies, the County Council District 4 Revitalization Committee, Columbia organizations and the Bryant Square Homeowner's Association. We are grateful for their involvement in its preparation. Although begun as the vision of one neighborhood, this Plan can serve as a model or guide for aging communities throughout Columbia and Howard County.

Sincerely,

Marsha S. McLaughlin, Director
Department of Planning and Zoning

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REVITALIZATION MASTER PLAN

1.0 INTRODUCTION

The Howard County Department of Planning and Zoning, Division of Environmental and Community Planning, initiated a study to assist the Bryant Square Homeowners Association (HOA) in revitalizing their property. URS Corporation (URS) was asked to develop and provide the following services:

- Preparation of base mapping for use in the study
- Site inventory and analysis of Bryant Square
- Development of a Concept Plan and recommendations
- Development of a Revitalization Master Plan with cost estimates
- Preparation of a separate Landscape Maintenance Manual

1.1 Methodology

Howard County's Department of Planning and Zoning, Division of Environmental and Community Planning, and URS met with members of County Council – District 4, Bryant Square Homeowners Association, the Columbia Association Wilde Lake Village Association, and the Columbia Housing Corporation to discuss the purpose, content, goals, and use of the revitalization master plan and landscape maintenance manual for Bryant Square. The project process began with a kick-off meeting with the stakeholders to discuss the goals and objectives for the Revitalization Master Plan and Landscape Maintenance Manual. A thorough site analysis to gather information and prepare base maps was conducted. Analysis of the existing site conditions was synthesized into an existing conditions plan. The Existing Conditions Plan (see **Figure 1**) identified four general areas of concern:

- Storm drainage and erosion issues
- Pedestrian circulation
- Vehicular and pedestrian
- Landscape plant material

Recommendations and alternatives were developed to improve the existing conditions and were synthesized into the Revitalization



Master Plan. The Revitalization Master Plan was presented to Howard County, the Bryant Square Homeowners Association, and other interested stakeholders including the Council Member – District 4, the Columbia Housing Corporation, the Wilde Lake Village Association, and the Columbia Association for review and comment in March 2003.

The separate Landscape Maintenance Manual was derived from the Revitalization Master Plan to provide maintenance practices and guidelines to implement the recommendations as well as provide on-going maintenance practices to sustain the implemented revitalization plan.

The Revitalization Master Plan includes recommendations for correcting erosion and drainage issues, improving and directing pedestrian circulation, maintaining pavement for both vehicular and pedestrian traffic, and protecting and revitalizing the landscape and plant material located in the common areas of Bryant Square. The revitalization plan identifies opportunities and recommends alternatives for project requirements and goals as appropriate.

1.2 Cost Estimate and Phasing

A cost estimate with phasing schedule was developed for the recommended improvements. The cost estimate is the probable cost, in 2003 dollars, of implementing the recommendations, also providing prioritization of implementation:

- Priority A – Immediate Implementation of 1-3 Years
- Priority B – Intermediate Implementation of 3-5 Years
- Priority C – Long-Term Implementation of 5-10 Years

The base cost to implement the above is shown in the cost estimate, including costs for alternate option recommendations.

The primary contacts include:

- Prop. Owner-Individual Townhouse Owner
- HOA-Home Owners Association
- DPW-Howard County Department of Public Works
- DPR-Howard County Department of Parks and Recreation



BRYANT SQUARE REVITALIZATION MASTER PLAN

COST ESTIMATE AND PHASING

URS

May 15, 2003

ESTIMATE OF PROBABLE COST

ITEM NUMBER ON PLAN	PRIORITY	PRIMARY CONTACT	DESCRIPTION	QTY.	UNIT	UNIT PRICE	PRIORITY A	PRIORITY B	PRIORITY C	TOTAL
1	A	HOA	SELECTIVE TREE TRIMMING	1	LS	\$750	\$750			
						SUBTOTAL	\$750			\$750
2	A	HOA	REMOVE JAPANESE ZELKOVA AND REMOVE FROM SITE, GRIND STUMP	1	LS	\$500	\$500			
			2 1/2" CAL. SHADE TREE	1	EACH	\$375	\$375			
						SUBTOTAL	\$875			\$875
3	A	HOA	ENHANCE ENTRANCE BY CREATING NEW SHRUB BED AND FLOWER BED. REMOVE EXISTING VEGETATION	1	LS	\$375	\$375			
			15" SPREAD SHRUBS	5	EACH	\$25	\$125			
			PURPLE CONEFLOWER, 2 YR POTS	12	EACH	\$10	\$120			
			PANSY, 3" ROOT PLUG	24	EACH	\$2	\$42			
			MULCH SHRUB AND FLOWER BED, 2" DEPTH SHREDDED HARDWOOD MULCH	40	SY	\$4	\$160			
						SUBTOTAL	\$822			\$822
4	B	HOA	REGRADE AREA	1	LS	\$300		\$300		
			GRASS SEED AND STRAW: SHADE- TOLERANT MIX	95	SY	\$3		\$285		
						SUBTOTAL		\$585		\$585
5	A	HOA	ENHANCE ENTRANCE BY CREATING NEW SHRUB BED AND FLOWER BED. REMOVE EXISTING VEGETATION	1	LS	\$375	\$375			
			15" SPREAD SHRUBS	5	EACH	\$25	\$125			
			PURPLE CONEFLOWER, 2 YR POTS	12	EACH	\$10	\$120			
			PANSY, 3" ROOT PLUG	24	EACH	\$2	\$42			
			MULCH SHRUB AND FLOWER BED, 2" DEPTH SHREDDED HARDWOOD MULCH	40	SY	\$4	\$160			
						SUBTOTAL	\$822			\$822
6	A	HOA	DAYSTAR COURT MILL 1" AND OVERLAY 1" ASPHALT PARKING AREAS DAYSTAR COURT	3,350	SY	\$2	\$7,538			
			REPLACE DAMAGED CURB AND GUTTER	100	LF	\$19	\$1,900			
			REMOVE AND REPLACE CONCRETE WHEEL STOPS	16	EACH	\$75	\$1,200			
			REPAINT FIRE LANE MARKINGS	1	LS	\$300	\$300			
			GRASS SEED AND STRAW: HEAVY- TRAFFIC MIX	40	SY	\$3	\$120			
						SUBTOTAL	\$11,058			\$11,058
6	A	HOA / DPW	#1 ADD ALTERNATE: REMOVE EXISTING ASPHALT WITHIN PARKING ISLANDS AND REPLACE WITH 5" REINFORCED STAMPED COLORED CONCRETE	2,880	SF	\$11	\$31,680			
			INSTALL NEW STAMPED COLORED CONCRETE IN ISLANDS	1	LS	\$16,000	\$16,000			
						SUBTOTAL	\$47,680			\$47,680
7	C	Property Owner/ HOA	REPLACE OR REPAIR TIMBER RETAINING WALL	30	LF	\$35			\$1,050	
						SUBTOTAL			\$1,050	\$1,050
8	A	HOA	INSTALL BEST MANAGEMENT PRACTICE FOR INFILTRATION FOR ROOF DOWNSPOUTS AND DRAINAGE SWALES	1	LS	\$1,200	\$1,200			
			GRASS SEED AND STRAW: SHADE TOLERANT MIX	20	SY	\$3	\$60			
						SUBTOTAL	\$1,260			\$1,260



ITEM NUMBER ON PLAN	PRIORITY	PRIMARY CONTACT	DESCRIPTION	QTY.	UNIT	UNIT PRICE	PRIORITY A	PRIORITY B	PRIORITY C	TOTAL
9	A	HOA	REGRADE AREA TO DECREASE RUNOFF VELOCITY	1	LS	\$1,200	\$1,200			
			GRASS SEED AND STRAW: SEMI SHADE TOLERANT MIX	105	SY	\$3	\$263			
						SUBTOTAL	\$1,463			\$1,463
10	A	HOA	INSTALL BEST MANAGEMENT PRACTICE FOR INFILTRATION OF ROOF DOWNSPOUTS AND DRAINAGE SWALES	1	LS	\$1,200	\$1,200			
			GRASS SEED AND STRAW: SEMI SHADE TOLERANT MIX	60	SY	\$3	\$150			
						SUBTOTAL	\$1,350			\$1,350
11	A	HOA	REGRADE AREA TO DECREASE RUNOFF VELOCITY	1	LS	\$500	\$500			
			GRASS SEED AND STRAW: SEMI SHADE TOLERANT MIX	20	SY	\$3	\$50			
						SUBTOTAL	\$550			\$550
12	B	DPW	REMOVE CONCRETE PAVEMENT	1,086	SF	\$7		\$7,602		
			AND REPLACE EXISTING CURB AND GUTTER	25	LF	\$19		\$475		
			REGRADE AREA	1	LS	\$250		\$250		
			4" DEPTH TOPSOIL	120	SY	\$4		\$480		
			SOD AREA	120	SY	\$5		\$600		
			EVERGREEN TREES: 6' HT, B&E	3	EACH	\$175		\$525		
						SUBTOTAL		\$9,932		\$9,932
12	B	DPW	#2 ADD ALTERNATE: RETAIN PORTION OF EXISTING CONCRETE TO CREATE 2 ADDITIONAL PARKING SPACES							
			REMOVE CONCRETE PAVEMENT AND REPLACE EXISTING CURB AND GUTTER	926	SF	\$7		\$6,482		
			STRIPE REMAINING CONCRETE TO CREATE 2 ADDITIONAL PARKING SPACES	1	LS	\$100		\$100		
						SUBTOTAL		\$6,582		\$6,582
13	A	HOA/DPW	NIGHTMIST COURT MILL 1" AND OVERLAY 1" ASPHALT PARKING AREAS DAYSTAR COURT	3,350	SY	\$2	\$7,538			
			REPLACE DAMAGED CURB AND GUTTER	100	LF	\$19	\$1,900			
			REMOVE AND REPLACE CONCRETE WHEEL STOPS	16	EACH	\$75	\$1,200			
			REPAINT FIRE LANE MARKINGS	1	LS	\$300	\$300			
			GRASS SEED AND STRAW: HEAVY- TRAFFIC MIX	40	SY	\$3	\$120			
						SUBTOTAL	\$11,058			\$11,058
13	A	HOA	#3 ADD ALTERNATE: REMOVE EXISTING ASPHALT WITHIN PARKING ISLANDS AND REPLACE WITH 5" REINFORCED STAMPED COLORED CONCRETE	2,880	SF	\$11	\$31,680			
			INSTALL NEW STAMPED COLORED CONCRETE IN ISLANDS	1	LS	\$16,000	\$16,000			
						SUBTOTAL	\$47,680			\$47,680
14	C	HOA/ Prop.Owner	REPLACE DAMAGED OR SETTLED CONCRETE WALKWAYS	150	SF	\$9			\$1,275	
			REGRADE AND FILL LOW SPOTS	1	LS	\$200			\$200	
			GRASS SEED AND STRAW: SHADE TOLERANT MIX	20	SY	\$3			\$50	
						SUBTOTAL			\$1,525	\$1,525
15	A	DPW	CLEAN DEBRIS FROM STORM DRAIN INLETS	1	LS	\$300	\$300			
						SUBTOTAL	\$300			\$300



ITEM NUMBER ON PLAN	PRIORITY	PRIMARY CONTACT	DESCRIPTION	QTY.	UNIT	UNIT PRICE	PRIORITY A	PRIORITY B	PRIORITY C	TOTAL
16	C	HOA	EVERGREEN TREES: 6' H1	11	EACH	\$175			\$1,925	
			SHRUBS: 15" SPREAD	14	EACH	\$25			\$350	
			GRASS SEED AND STRAW: FULL SUN SEED MIX	1,000	SY	\$3			\$3,000	
						SUBTOTAL			\$5,275	\$5,275
17	A	HOA	CONSTRUCT NEW WALKWAY BETWEEN UNITS	125	SF	\$7	\$875			
			REGRADE AREA	1	LS	\$250	\$250			
			GRASS SEED AND STRAW: HEAVY TRAFFIC MIX	39	SY	\$3	\$97			
						SUBTOTAL	\$1,222			\$1,222
18	A	HOA	REGRADE SWALE TO DECREASE RUNOFF VELOCITY	1	LS	\$350	\$350			
			GRASS SEED AND STRAW: SEMI SHADE TOLERANT MIX	100	SY	\$3	\$250			
			REMOVE NORWAY MAPLE AND REMOVE FROM SITE, GRIND STUMP	1	LS	\$500	\$500			
			2 1/2" CAL. B&B SHADE TREE	1	EA	\$375	\$375			
						SUBTOTAL	\$1,475			\$1,475
19	C	HOA/DPW	REPLACE DAMAGED OR SETTLED CONCRETE WALKWAYS	150	SF	\$9			\$1,350	
			REGRADE AND FILL LOW SPOTS	1	LS	\$200			\$200	
			ADJUST WATER METERS	4	EACH	\$75			\$300	
			INSTALL FRENCH DRAIN OR YARD INLETS	3	EACH	\$1,500			\$4,500	
			GRASS SEED AND STRAW: SEMI SHADE TOLERANT MIX	10	SY	\$3			\$25	
						SUBTOTAL			\$6,375	\$6,375
20	A	HOA	GRASS SEED AND STRAW: HEAVY TRAFFIC MIX	190	SY	\$3	\$475			
						SUBTOTAL	\$475			\$475
21	C	HOA	REPLACE CONCRETE STEPS	1	LS	\$3,750			\$3,750	
			ADD HANDRAIL	120	LF	\$10			\$1,200	
			GRASS SEED AND STRAW: SEMI SHADE TOLERANT MIX	80	SY	\$3			\$200	
						SUBTOTAL			\$5,150	\$5,150
22	NA	DRP	TUNNEL LIGHTING NO COST ASSOCIATED WITH RECOMMENDATION	0	0	\$0			\$0	
						SUBTOTAL			\$0	\$0
23	C	DPW	NEW CONCRETE SIDEWALK ALONG GOVERNOR WARFIELD PARKWAY BETWEEN TWIN RIVERS DRIVE AND LITTLE PATUXENT PARKWAY (ANY REQUIRED RETAINING WALLS NOT INCLUDED)	5,040	SF	\$6			\$30,240	
			GRASS SEED AND STRAW: HEAVY TRAFFIC SEED MIX	220	SY	\$3			\$660	
						SUBTOTAL			\$30,900	\$30,900
24	C	HOA	REMOVE GUY WIRE FROM PIN OAK TREE TRUNKS	3	EACH	\$50			\$150	
						SUBTOTAL			\$150	\$150
25	A	HOA	REGRADE SWALE INSTALL BMP TO DECREASE VELOCITY	1	LS	\$1,700			\$1,700	
			GRASS SEED AND STRAW: WET AREA TOLERANT MIX	200	SY	\$3			\$500	
						SUBTOTAL			\$2,200	\$2,200



ITEM NUMBER ON PLAN	PRIORITY	PRIMARY CONTACT	DESCRIPTION	QTY.	UNIT	UNIT PRICE	PRIORITY A	PRIORITY B	PRIORITY C	TOTAL
26	B	DPW	REHABILITATE STORMWATER OUTFALL: REMOVE SEDIMENT, CLEAN-UP AND RESET RIPRAP	1	LS	\$1,700		\$1,700		
			WET AREA SEED MIX	250	SY	\$4		\$1,000		
						SUBTOTAL		\$2,700		\$2,700
26	B	DPW	#4 ADD ALTERNATE: CREATE SITE AMENITY BIORETENTION AREA	1	LS	\$2,000		\$2,000		
			ORNAMENTAL SHRUBS	15	EACH	\$25		\$375		
			ORNAMENTAL GRASSES 1 GAL CONTAINER	25	EACH	\$15		\$375		
			ORNAMENTAL TREES: 2 1/2 CAL. B&B	5	EACH	\$250		\$1,250		
						SUBTOTAL		\$4,000		\$4,000
27	C	HOA/ Prop. Owner	NEW SIDEWALK TO CONNECT TRAIL TO ADJACENT PROPERTY	300	SF	\$6			\$1,800	
			NEW UNDERSTORY SHRUBS TO DIRECT PEDESTRIAN TRAFFIC	7	EACH	\$25			\$175	
						SUBTOTAL			\$1,975	\$1,975
28	C	HOA/DRP	UNDERSTORY SHRUBS TO DIRECT PEDESTRIAN TRAFFIC	15	EACH	\$25			\$375	
						SUBTOTAL			\$375	\$375
29	NA	HOA	MAINTENANCE COSTS FOR OPEN SPACE ALREADY ACCOUNTED FOR IN ANNUAL LANDSCAPE CONTRACTOR'S AGREEMENT							
30	A	HOA	REMOVE EXISTING AUTUMN OLIVE	6	EACH	\$30	\$180			
			ORNAMENTAL TREES: 2 1/2 CAL. B&B	3	EACH	\$250	\$750			
						SUBTOTAL	\$930			\$930
31	A	HOA	REMOVE EXISTING NORWAY MAPLE AND GRIND STUMP	1	EACH	\$500	\$500			
			GRASS SEED AND STRAW: SHADE TOLERANT MIX	100	SY	\$3	\$251			
						SUBTOTAL	\$751			\$751
32	A	HOA	REHABILITATE GRASS SWALE	1	LS	\$1,000	\$1,000			
			GRASS SEED AND STRAW: SHADE TOLERANT MIX	90	SY	\$4	\$360			
						SUBTOTAL	\$1,360			\$1,360
33	A	HOA	RESHAPE SLOPE	1	LS	\$1,000	\$1,000			
			SPREAD 4" TOPSOIL	70	SY	\$4	\$280			
			GRASS SEED AND STRAW: SHADE TOLERANT MIX	70	SY	\$4	\$280			
						SUBTOTAL	\$1,560			\$1,560
34	A	HOA / Prop. Owner / DPW	REMOVE AND REPLACE WOODEN STEPS	1	LS	\$1,200	\$1,200			
			REGRADE SLOPE TO DIRECT RUNOFF	1	LS	\$800	\$800			
			INSTALL FRENCH DRAIN OR YARD DRAIN	1	EACH	\$1,500	\$1,500			
			GRASS SEED AND STRAW: SEMI SHADE TOLERANT MIX	70	SY	\$3	\$175			
						SUBTOTAL	\$3,675			\$3,675
35	A	HOA	REGRADE AND FILL LOW SPOTS	1	LS	\$300	\$300			
			GRASS SEED AND STRAW: SHADE TOLERANT MIX	10	SY	\$3	\$30			
						SUBTOTAL	\$330			\$330



ITEM NUMBER ON PLAN	PRIORITY	PRIMARY CONTACT	DESCRIPTION	QTY.	UNIT	UNIT PRICE	PRIORITY A	PRIORITY B	PRIORITY C	TOTAL
36	A	HOA/DRP	REGRADE AND RESHAPE SWALE	1	LS	\$4,000	\$4,000			
			YARD DRAINS	1	LS	\$1,000	\$1,000			
			GRASS SEED AND STRAW: WET AREA MIX	350	SY	\$4	\$1,400			
						SUBTOTAL	\$6,400			\$6,400
37	A	HOA	REGRADE AND FILL LOW SPOTS	1	LS	\$200	\$200			
			GRASS SEED AND STRAW: SHADE TOLERANT MIX	10	SY	\$3	\$30			
						SUBTOTAL	\$230			\$230
38	B	HOA	REMOVE CONCRETE FOUNDATION	1	LS	\$750		\$750		
			REMOVE SHRUBS	4	EACH	\$50		\$200		
			REMOVE TREES	3	EACH	\$150		\$450		
			SPREAD 4" TOPSOIL	75	SY	\$4		\$300		
			EVERGREEN TREES: 6' HT	5	EACH	\$175		\$875		
			ORNAMENTAL TREES: 2 1/2 CAL	3	EACH	\$250		\$750		
			GRASS SEED AND STRAW: FULL SUN MIX	75	SY	\$3		\$225		
						SUBTOTAL		\$3,550		\$3,550
38	B	HOA	#5 ADD ALTERNATE: CREATE COMMUNITY GARDEN							
			REGRADE SLOPE	1	LS	\$1,500		\$1,500		
			ORNAMENTAL SHRUBS: 24" HT	25	EACH	\$35		\$875		
						SUBTOTAL		\$2,375		\$2,375
39	A	HOA	INSTALL BEST MANAGEMENT PRACTICE FOR INFILTRATION OF ROOF DOWNSPOUTS AND DRAINAGE SWALES	1	LS	\$1,200	\$1,200			
			REMOVE DEBRIS PILE	1	LS	\$100	\$100			
			RESHAPE AREA TO DIRECT RUNOFF	1	LS	\$400	\$400			
			GRASS SEED AND STRAW: SEMI SHADE TOLERANT MIX	430	SY	\$3	\$1,075			
						SUBTOTAL	\$2,775			\$2,775
40	B	HOA	GRIND TREE STUMP	1	LS	\$100		\$100		
			REGRADE SLOPE	1	LS	\$500		\$500		
			GRASS SEED AND STRAW: SEMI SHADE MIX	125	SY	\$3		\$313		
						SUBTOTAL		\$913		\$913
41	A	HOA	RESHAPE SLOPE	1	LS	\$1,500	\$1,500			
			SPREAD 4" DEPTH TOPSOIL	150	SY	\$4	\$600			
			GRASS SEED AND STRAW: SHADE TOLERANT MIX	150	SY	\$3	\$375			
						SUBTOTAL	\$2,475			\$2,475
42	C	HOA / Prop. Owner	REPLACE DAMAGED OR SETTLED CONCRETE SIDEWALK	120	SF	\$9			\$1,080	
			REMOVE AND REPLACE WOOD TIMBER RETAINING WALL	30	LF	\$35			\$1,050	
						SUBTOTAL			\$2,130	\$2,130
43	B	HOA	REMOVE EXISTING AUTUMN OLIVE	6	EACH	\$30		\$180		
			ORNAMENTAL TREES: 2 1/2 CAL	3	EACH	\$250		\$750		
						SUBTOTAL		\$930		\$930
44	A	HOA	REMOVE DEBRIS PILE	1	LS	\$50	\$50			
			REGRADE AREA TO DIRECT RUNOFF	1	LS	\$500	\$500			
			GRASS SEED AND STRAW: WET AREA MIX	120	SY	\$4	\$480			
						SUBTOTAL	\$1,030			\$1,030
45	B	HOA / Prop. Owner	INFILL AREAS WITH CONCRETE TO MATCH EXISTING SIDEWALK	100	SF	\$7		\$700		
						SUBTOTAL		\$700		\$700



ITEM NUMBER ON PLAN	PRIORITY	PRIMARY CONTACT	DESCRIPTION	QTY.	UNIT	UNIT PRICE	PRIORITY A	PRIORITY B	PRIORITY C	TOTAL
46	B	HOA	EVERGREEN TREES 6' HT, B&E	5	EACH	\$175		\$875		
						SUBTOTAL		\$875		\$875
47	B	HOA	REMOVE TEMPORARY WIRE FENCE BARRIER	1	LS	\$50		\$50		
			REMOVE EXISTING OVERGROWN JUNIPER	1	EACH	\$50		\$50		
			SHRUBS 15" SPREAD	12	EACH	\$25		\$300		
						SUBTOTAL		\$400		\$400
48	A	HOA	REMOVE DEBRIS PILE	1	LS	\$50	\$50			
			REMOVE EXISTING AUSTRIAN PINES AND GRIND STUMP	2	EACH	\$100	\$200			
			RESHAPE AREA TO DIRECT RUNOFF	1	LS	\$1,000	\$1,000			
			YARD DRAIN	1	LS	\$500	\$500			
			EVERGREEN TREES 6' H1	7	EACH	\$175	\$1,225			
			GRASS SEED AND STRAW: SEMI SHADE MIX	300	SY	\$3	\$750			
						SUBTOTAL	\$3,725			\$3,725
49	A	HOA	GRASS SEED AND STRAW: SHADE TOLERANT MIX	100	SY	\$3	\$300			
						SUBTOTAL	\$300			\$300
50	A	HOA	NEW FENCE OPTION 1	380	LF	\$17	\$6,460			
			REMOVE EXISTING AUSTRIAN PINES	3	EACH	\$100	\$300			
			RESHAPE AREA	1	LS	\$1,500	\$1,500			
			SPREAD 4" TOPSOIL	800	SY	\$4	\$3,200			
			EVERGREEN TREES 6' H1	5	EACH	\$175	\$875			
			ORNAMENTAL TREES 2 1/2" CAL	3	EACH	\$250	\$750			
			GRASS SEED AND STRAW: SEMI SHADE TOLERANT MIX	800	SY	\$3	\$2,000			
						SUBTOTAL	\$15,085			\$15,085
50	A	HOA/Roslyn Rise	#6 ADD ALTERNATE: NEW FENCE OPTION 2	140	LF	\$17	\$2,380			
						SUBTOTAL	\$2,380			\$2,380
51	A	HOA	RESHAPE AREA	1	LS	\$250	\$250			
			SPREAD 4" TOPSOIL	30	SY	\$4	\$120			
			EVERGREEN TREES 6' H1	3	EACH	\$175	\$525			
			SHRUBS 15" SPREAD	7	EACH	\$25	\$175			
			GRASS SEED AND STRAW: SEMI SHADE MIX	30	SY	\$3	\$75			
						SUBTOTAL	\$1,145			\$1,145
51	A	HOA/Roslyn Rise	#7 ADD ALTERNATE: COORDINATE NEW WALKWAY FROM ROSLYN RISE UNITS TO PUBLIC SIDEWALK	1	LS	\$650	\$650			
						SUBTOTAL	\$650			\$650
MISC		HOA	REMOVE AUSTRIAN PINES (NOT DESIGNATED)	6	EACH	\$100		\$600		
			REMOVE ORNAMENTAL CHERRY TREES (NOT DESIGNATED)	3	EACH	\$100		\$300		
						SUBTOTAL		\$900		\$900
							TOTAL PRIORITY A	TOTAL PRIORITY B	TOTAL PRIORITY C	GRAND TOTAL
BASE COST TOTAL							\$75,250	\$21,485	\$57,105	\$153,839
ADD ALTERNATE NET TOTAL (Includes cost savings provided by alternates)							\$43,709	\$555	\$0	\$44,264
GRAND TOTAL							\$118,959	\$22,040	\$57,105	\$198,103



1.3 Project Information

Project Name: Bryant Square Revitalization Master Plan

Total Acreage: 10.2 acres

Total Units: 88 Townhouses

Total Parking: 188 Total Parking Spaces (Private and Common)

Parking Summary

Daystar Court:

Privately owned parking spaces	8
Common parking spaces	67
Total spaces Daystar Court	<u>75</u>

Nightmist Court:

Privately owned parking spaces	8
Common parking spaces	105
Total spaces Nightmist Court	<u>113</u>



2.0 EXISTING CONDITIONS

The existing conditions plan (**Figure 1**) is presented in both graphic and written form in this report. To simplify coordination between the graphic plan and written report, Bryant Square has been divided into seven separate areas. A key plan has been included for each area in the written plan, which corresponds directly to the graphic plan. These delineated areas are as follows:

- Main Entrance Area
- Southern Boundary Area
- Western Boundary Area
- Northern Boundary Area
- Daystar Court Area
- Nightmist Court Area
- Parking Areas

The Main Entrance Area includes the landscaped areas between Twin Rivers Road and the privately owned units 10280-10229 Daystar Court and units 10284 and 10800 Nightmist Court.

The Southern Boundary Area is the large open area between the Nightmist units, the Century Plaza property boundary, and the existing entrance at Governor Warfield Parkway.

The Western Boundary Area includes all the common areas along the Western Boundary Area and behind the units backing the trail down to the stand of white pine trees adjacent to the Nightmist Court units 10343 and 10339.

The Northern Boundary Area is bounded by the property line between Bryant Square and Roslyn Rise, the area between the units fronting Twin Rivers Road, and the area between the units fronting the parking area of Daystar Court, and the end of unit 10316.

Daystar Court Area includes all the common areas between the units of Daystar Court.

The Nightmist Court Area includes all the common areas between the units of Nightmist Court.

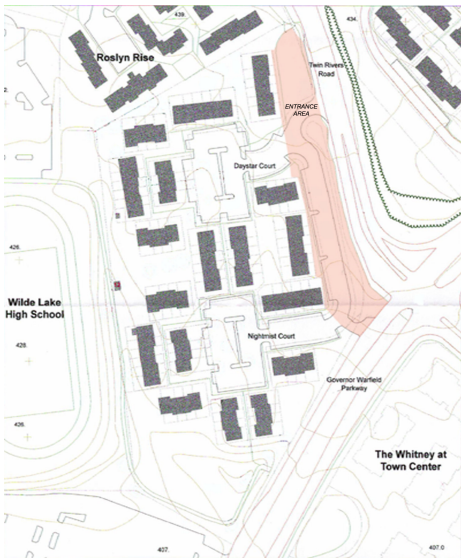
The Parking Areas includes both the private and common parking spaces for both Daystar and Nightmist Courts.



The Existing Conditions Plan identifies conditions observed at Bryant Square during the site inventory and analysis performed in December 2002. The site inventory and analysis identified four general areas of concern:

- Storm drainage and erosion
- Pedestrian circulation
- Vehicular and pedestrian pavement
- Plant material

2.1 Main Entrance Area



**Figure 2: Key Map
Main Entrance Area**

The Main Entrance Area (See **Figure 2**) of Bryant Square is marked by an entry sign, which is visible from both directions along Twin Rivers Road (See **Figure 3**). There are two existing flower beds on each side of the entrance drive. The flower bed on the south side, directly under the Bryant Square sign is planted with Iris and Liriope. There is space within the flower bed for planting of spring and summer annuals. The flower bed on the north side is a small oval-shape bed, which is currently planted with Cone Flower and has space for spring and summer annuals. Directly to the north east of this flower bed is a utility box positioned within a shrub bed. It is currently planted with deciduous shrubs, which had been disturbed by recent utility work.



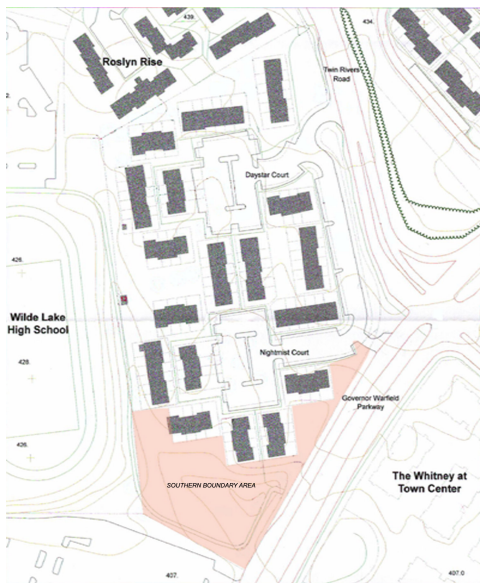
Figure 3: Entry Sign



The area north of the entrance in front of Daystar unit 10290 and the property line was undergoing utility work. The existing trees in front of Daystar Court unit 10280 are in excellent condition with the exception of the Japanese Zelkova, which is in very poor condition as it has developed a fissure. The fissure is splitting the tree. Although the tree has been cabled for self-support, its position adjacent to the walkway and near the residential units presents a safety concern. The utility work has disturbed the existing soil and topography in the area. There is a utility box located in front of Daystar unit 10290, which has been recently disturbed. The shrubs growing around this utility box have also been disturbed.

The open space and perimeter screening along Twin Rivers Road is in excellent condition. The concrete fire access lane at the corner of Twin Rivers Road and Governor Warfield Parkway is no longer needed, according to the County staff.

A worn and denuded pedestrian path exists due to walk-through traffic leading from the end unit of Roslyn Rise to the sidewalk at the north boundary of the common area fronting Twin Rivers Road.



**Figure 4: Key Map
Southern Boundary Area**

2.2 Southern Boundary Area

The Southern Boundary Area is primarily a large open space, which gently slopes from southwest to northeast (See **Figure 4**). The trail wraps around this open space and terminates at the pedestrian tunnel under Governor Warfield Parkway. The slope between the trail and the property boundary is in fair condition, but has worn pedestrian paths used as a cut-through to the adjacent property (See **Figure 5**).

There is no sidewalk along Governor Warfield Parkway fronting Bryant Square. The stand of White Pines and slope between the southern property boundary and the pedestrian tunnel entrance is in excellent condition. The lighting in the tunnel may be insufficient and recent utility work on the slope adjacent to the entrance has caused sediment to be deposited in the tunnel. The slope between the tunnel and Twin Rivers Road is in good condition with minor surface erosion due to worn pedestrian paths from walk-through pedestrian traffic. The open space has a stand of White Pines, which screens Nightmist units 10339 to 10331 from the trail and high school and is in excellent condition.



There is a grass swale running between the White Pines and the property fences which discharges the runoff from the Western Boundary swale to the outfall at the northeast end on this area (See **Figure 6**). The swale is eroded and lacks vegetation. There is a stand of Autumn Olives located off the back of Nightmist Court units 10339 to 10331, which are listed on the Maryland Department of Natural Resources Invasive Species List (See Landscape Maintenance Manual Section 14). There is surface erosion of the grass area behind units 10339 and 10337, which is caused by the dense shade cast from the White Pines and the Norway Maples and Sycamores located in this area. There is also a utility box located adjacent to the Norway Maples in the common area.



Figure 5: Slope Between Trail and Property Boundary Showing Worn Pedestrian Paths



There are five Pin Oaks adjacent to the White Pine stand. Guy wire used to stake the trees when planted, but not removed, has girdled three of the Pin Oaks.



Figure 6: View of Outfall in Southern Boundary Area

At the back of Nightmist Court units 10321 to 10327 is an eroded swale caused by runoff with high velocity. The roof drains from these units and from unit 10331 are contributing to the runoff and velocity in the swale. The outfall area is in fair condition due to erosion and clogged storm drains.

The concrete steps leading from the Nightmist Court units to the pedestrian tunnel are settling and have a pronounced tilt toward the east. The slope to the east of these steps has been recently disturbed by utility work.



Behind Nightmist Court units 10311 and 10317 is a lawn area, which is in excellent condition. Between Nightmist Court units 10307 and 10311 the slope is in poor condition due to erosion caused by pedestrian traffic, dense shade, and runoff velocity (See **Figure 7**). The swale behind Nightmist units 10311 and 10317 is in fair condition due to erosion caused by runoff velocity and lack of vegetation to stabilize the slope.



Figure 7: Eroded Slope Behind Nightmist Units 10307 and 10311

2.3 Western Boundary Area

Figure 8 on the key map indicates the limits of the Western Boundary Area. A grass swale runs from north to south along its entire length of the adjacent trail (See **Figure 9**). A debris pile temporarily dams the runoff at the northern end of the swale adjacent to Daystar Court unit 10316. There is evidence that the velocity of runoff is high due to the erosion and gully along its length. The existing grass is bent from the flow of the runoff. There are three Autumn Olives growing along the trail, which are listed on the Maryland Department of Natural Resources Invasive Species list.

There is a steep hill formed adjacent to the Daystar Court unit 10319 which recently had a large shade tree removed. The tree stump has new water sprouts forming at its base. The grass is thin with bare patches.

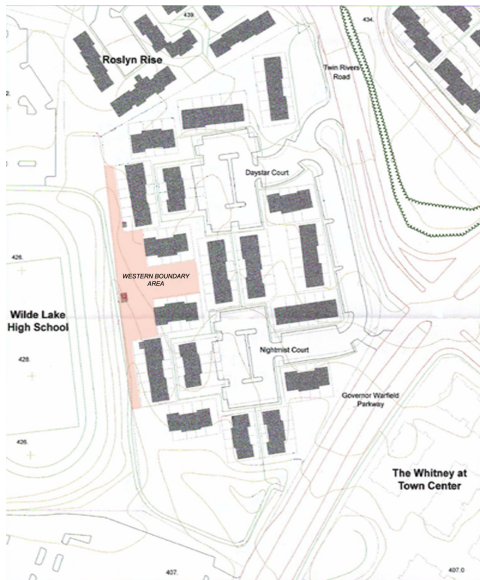


Figure 8: Key Map

Western Boundary Area



Between Daystar Court units 10315 and 10309 and the Nightmist Court units 10338 and 10330 the area forms a shallow depression where runoff ponds.



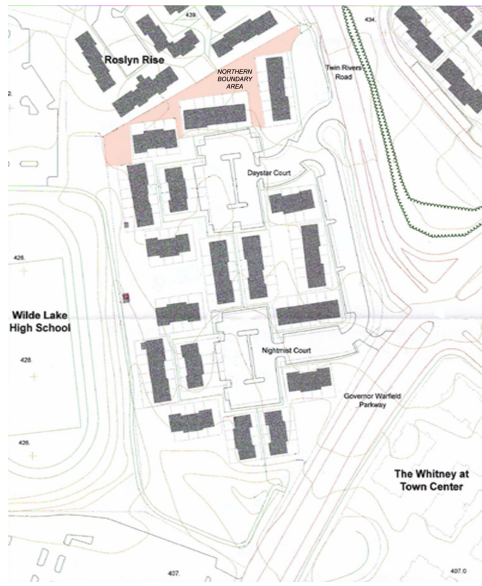
Figure 9: View of Western Boundary Area

The roof downspouts daylighting directly into the depression compounds the runoff ponding. There is a debris pile, which temporarily dams the runoff adjacent to Nightmist Court unit 10338. The swale ends adjacent to Nightmist units 10343 and 10339, where it forms a low depression.

The concrete foundation of an old storage shed is located adjacent to the trail with Yew and Viburnum shrubs around the perimeter. This foundation is no longer used by the residents of Bryant Square and has on several occasions, been observed as a gathering area for non-residents using the trail or walking through the complex.

Adjacent to Nightmist unit 10338 there is a worn path leading from the end of the existing concrete walk to the trail.





**Figure 10: Key Map
Northern Boundary Area**

2.4 Northern Boundary Area

This area (See **Figure 10**) has severe erosion problems. Most of the problems are related to the worn and denuded paths created by pedestrians walking through Bryant Square and Roslyn Rise. The area directly behind and to both sides of Daystar Court units 10294 and 10304 is severely eroded. Compounding the erosion caused by foot traffic is the depressed ground, which acts as a swale channeling water toward the low spot behind Daystar unit 10316 (See **Figure 11**).

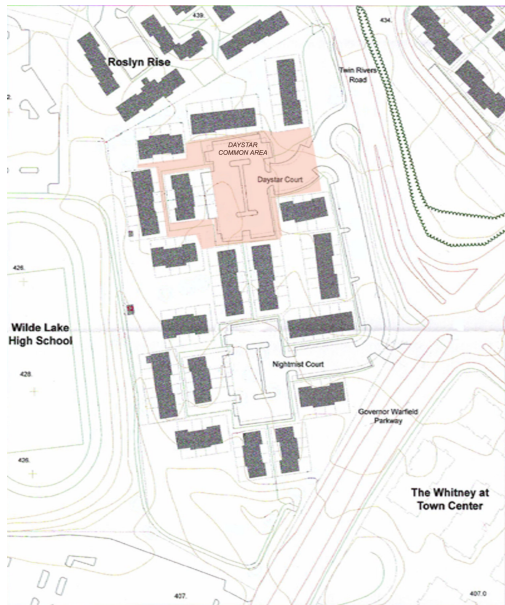


Figure 11: Erosion and Runoff Behind Daystar Unit 10316

A debris pile in the low spot acts like a dam blocking runoff. The runoff is channeled across the northwest corner of Daystar Court unit 10316. The roof downspouts daylighting just beyond the private backyard fences increases the runoff volume and velocity.

There are utility boxes located throughout the area with exposed cable visible. Several Austrian Pines within this area are showing signs of disease and are at the end of their useful life span.





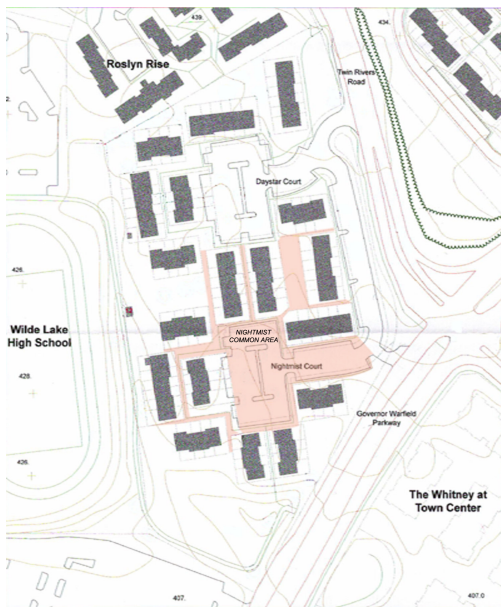
**Figure 12: Key Map
Daystar Court Area**

2.5 Daystar Court Area

Figure 12 shows the Daystar Court Area. There are two wooden retaining walls that appear to be overturning along the concrete sidewalks adjacent to Daystar Court units 10285 and 10305, respectively.

Adjacent to Daystar Court unit 10310 the concrete is settling and the grass is worn due to walkthrough traffic. Adjacent to Daystar units 10314 and 10320 is a uniquely shaped area of grass, concrete pavers, and sidewalk. The existing configuration is in fair condition as pedestrians cut across the grass area causing the area to become compacted and eroded.

A temporary fence has been erected adjacent to unit 10309 consisting of stakes and wire. The Juniper in the shrub bed is overgrown. The wood timber planter adjacent to Daystar Court unit 10309 is in good condition. The slope adjacent to the planter box is only in fair condition due to runoff velocity and worn paths from pedestrian walk through traffic.



**Figure 13: Key Map
Nightmist Court Area**

2.6 Nightmist Court Area

Figure 13 shows the Nightmist Court area. The courtyard between Nightmist Court units 10327 and 10317 is in fair condition. The concrete sidewalk and several water meters appear to be settling, which creates low spots for runoff to pond. The concrete sidewalk in front of Nightmist Court unit 10305 appears to be settling. There are several low spots in the area.

The wooden steps and slope between Nightmist Court units 10327 and 10331 is in poor condition (See **Figure 14**). The wooden steps are being undermined and the slopes are eroded due to excessive runoff.

The central courtyard between Daystar Court and Nightmist Court units 10301 and 10314 is in good condition. The open space behind units 10289 and 10314 is in fair condition due to erosion caused by runoff velocity and is compounded by roof downspout discharge. The runoff cascades over the wooden retaining wall before flowing into the Nightmist Court parking area.





Figure 14: Wooden Steps Undermined and Eroded Slope

At both ends of units 10284 and 10294 the open space is in poor condition due to erosion creating gullies caused by runoff velocity and lack of vegetation stabilizing the soil. Roof downspouts daylighting just beyond the private property compounds the runoff problem.

The area behind Nightmist Court units 10324 and 10325 and adjacent to unit 10330 is in good condition. There is a worn path in this area due to walk through pedestrian traffic.



2.7 Parking Areas

The asphalt parking areas in Daystar Court and Nightmist Court are in fair condition at the time of the site visit. (See **Figure 15**). The County-owned roadway was resurfaced in Spring 2003. The flush concrete curb and gutters are in good condition. The concrete wheel stops along the center-parking islands are damaged. The fire lane markings are worn and faded. The grass islands are only in fair condition due to surface erosion, debris, and empty homeowner trash cans blowing around the area. Some of the street signs are oriented incorrectly and the parking signs are inconsistent in design, size and placement.

Some of the planter areas around the parking area have had vegetation recently removed. The soil is disturbed and in some places bare soil is exposed.



Figure 15: Parking Area Nightmist Court

3.0 PROPOSED REVITALIZATION MASTER PLAN

3.1 Introduction

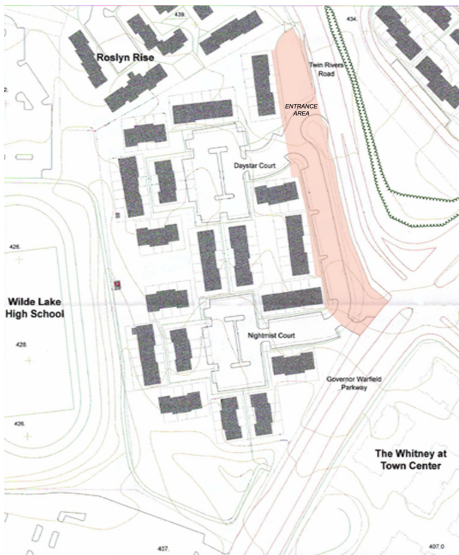
The Revitalization Master Plan (See **Figure 16**) addresses all conditions observed and documented in the Existing Conditions Plan. Recommendations for correcting and improving erosion problems, drainage, vehicular and pedestrian circulation, landscape plant materials and pavement aesthetics should be coordinated with the Wilde Lake Community Association, the Columbia Association, Howard County, utility companies, and other agencies as required. Before beginning work on proposed recommendations, permission from all governing agencies should be obtained where appropriate.

The Revitalization Master Plan is presented in both graphic and written form in this report. To simplify coordination between the graphic plan and written report, Bryant Square has been divided into seven separate areas. A key plan has been included to each delineation area in the written plan, which corresponds directly to the graphic plan. These delineated areas are as follows:

- Main Entrance Area
- Southern Boundary Area
- Western Boundary Area
- Northern Boundary Area
- Daystar Court Area
- Nightmist Court Area
- Parking Areas

3.2 Main Entrance Area

Figure 17 shows the Main Entrance Area. The flower beds on the north and south side of the entry drive should be reshaped to form a symmetrical flower bed. Remove and replace the existing shrubs with a combination of dwarf shrubs, ornamental grasses, perennials, and provide space for planting spring and summer annuals. This new planting bed will provide screening of the utility box and provide a more visual sense of arrival for Bryant Square. The flower beds do not impact sight distance needed for motorists. The flower bed on the south side of the entrance drive should be planted with corresponding dwarf shrubs, ornamental grasses, perennials, and provide space for planting annual spring



**Figure 17: Key Map
Main Entrance Area**



and summer flowers. The existing perennials could be transplanted within the new bed as desired.

Once the current utility work has been completed, regrade the area disturbed and seed with a semi-shade tolerant grass mix to re-establish the turf and stabilize the soil. Remove and replace the shrubs screening the utility box with ornamental grasses. Ornamental grasses can be temporarily relocated during future utility work with minimal disturbance.

Remove and replace the Japanese Zelkova that has structured cabling with a replacement shade tree (See Section 3.0 of the Landscape Maintenance Manual). Regrade the area and seed with a semi-shade tolerant grass mix to re-establish the turf and stabilize the soil. (See Landscape Maintenance Manual Section 6.4 for Seed Mixes)

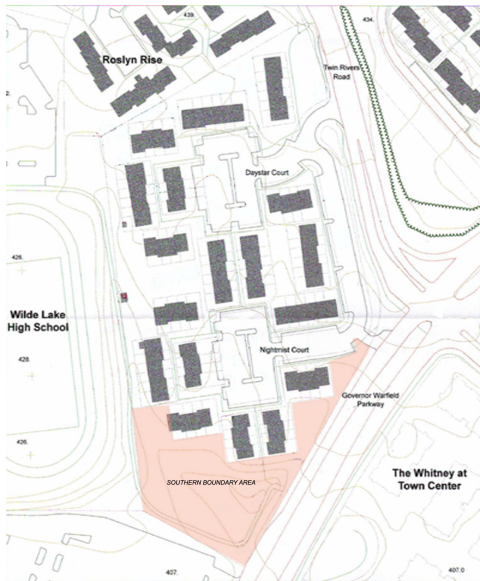
Limb-up the trees along Twin Rivers Road to maintain sight distance for motorists, to 14' maximum, or as required. Maintain the open space and perimeter landscaping.

Remove the former fire access concrete pavement, regrade the area, spread 4" topsoil, and sod with a full-sun heavy traffic grass. Plant additional evergreens to screen Bryant Square. An alternative recommendation is to retain the concrete adjacent to Daystar Drive to create two additional parking spaces. Remove the remaining concrete and install sod and evergreen plantings for screening.

Coordinate with Roslyn Rise for connecting the existing public sidewalk to the Roslyn Rise townhouses. Install shrub and evergreen plantings to deter walk-through traffic between the Roslyn Rise townhouses and Bryant Square. Regrade the disturbed area, spread 4" of topsoil and overseed with a semi-shade tolerant grass mix to reestablish the turf and stabilize the soil.

3.3 Southern Boundary Area

Figure 18 shows the Southern Boundary Area. Maintain the White Pines on the west and east side of this area and the open space as an amenity for Bryant Square residents. Remove the unused guy wire from the Pin Oak tree trunks and replace trees as they die or become diseased.



**Figure 18: Key Map
Southern Boundary Area**



Remove the Autumn Olives, which are listed on the Maryland invasive species list. Replace with ornamental trees.

Regrade the slope adjacent to Nightmist Court unit 10339, spread 4" topsoil and plant with a shade tolerant grass seed mix for slope stabilization.

Rehabilitate the swale between the White Pines and the townhouse fences. Overseed with a wet-area, shade-tolerant grass mix to stabilize the swale.

Remove and replace the Norway Maple behind Nightmist Court unit 10339 with another shade tree, aerate to loosen the compacted soil and seed with a shade-tolerant grass mix. Remove the three invasive Autumn Olives.

Rehabilitate the stormwater outfall, remove sediment, clean, remove, and reset riprap as required. Seed with a wet-area grass mix to stabilize the slope.

An alternative recommendation is to create a site amenity bioretention area at the stormwater outfall (See **Figure 19**). See Section 6 for explanation of bioretention facilities.



Figure 19: Examples of a Bioretention Amenity

Underplant vegetated slopes between trail and property boundary to direct pedestrian traffic along trail with shrubs and small flowering trees. Consider installing a paved path connecting Bryant Square to the Century Plaza property for trail access.

Investigate increasing illumination and monitoring the need for bulb replacement when required in the tunnel. Investigate the installation of a sidewalk along Governor Warfield Parkway between Twin Rivers Road and Little Patuxent Parkway.

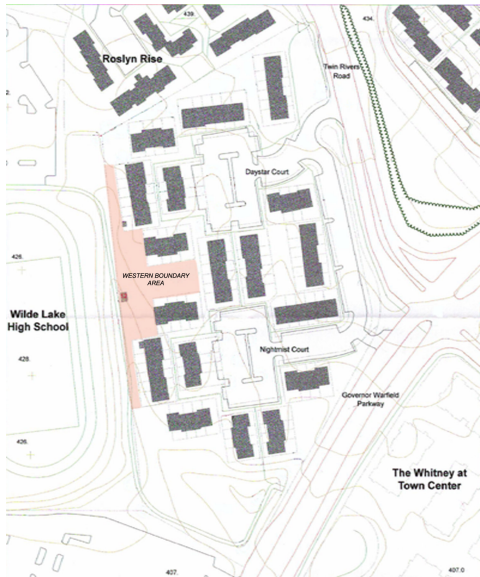


Rehabilitate the swale with BMP's (See Section 6 Best Management Practices for Runoff) to decrease runoff velocity behind Nightmist Court units 10327 and 10321. Regrade area and seed with a wet-area, semi-shade tolerant grass mix to stabilize the swale.

Replace concrete walk, fill in low spots, adjust water meters and install French drains, as needed to direct runoff in the courtyard between Nightmist Court units 10327 and 10317. Replace concrete steps leading from the courtyard to tunnel entrance. Add handrail, regrade slope, and seed with a shade tolerant grass mix to stabilize slope.

Construct a walkway between Nightmist Court units 10311 and 10307 to allow access to the lawn area. Regrade area, spread 4" topsoil and seed with a semi-shade grass mix to stabilize the slope. Regrade swale to decrease runoff velocity. Seed with a semi-shade grass mix to stabilize slopes. Plant trees and shrubs to direct pedestrian traffic to walkways. Remove the Norway Maples and replace with shade trees.

3.4 Western Boundary Area



**Figure 20: Key Map
Western Boundary Area**

Figure 20 shows the Western Boundary Area. Remove the debris pile and regrade the area between the low point at the northern end of the area and the swale along the trail to direct runoff and decrease velocity. Coordinate maintenance of low area with the adjacent property owner. Rehabilitate swale with Best Maintenance Practices (BMP's) along length of trail to decrease the velocity of runoff. Reshape swale as needed. Overseed with wet area grass mix to stabilize swale.

Remove the debris pile and regrade the area between Daystar units 10315 and 10309 and Nightmist units 10338 and 10330 to redirect runoff and decrease the velocity. Install BMP's to reduce runoff velocity, regrade area and overseed with a semi-shade tolerant grass mix to stabilize the soil.

Remove the three invasive Autumn Olives adjacent to the trail. Remove the Austrian Pines in this area as they are near the end of their useful life span and are susceptible to pests and disease as they decline. Grind the tree stump adjacent to Daystar unit 10319 to 4" below grade.



Regrade the slope to eliminate humps and to form gentle terraces to decrease runoff velocity. Overseed with a semi-shade tolerant grass mix to stabilize soil.

Remove the concrete foundation adjacent to the trail. Also remove the shrubs and Austrian Pine in this area. Regrade the area and overseed with a full-sun grass mix to stabilize the soil. Regrade the worn path to loosen soil, spread 4" topsoil and seed with a full-sun grass mix to stabilize the soil. Install new tree and shrub plantings along trail to direct pedestrian traffic along trail and deter walk-through traffic in Bryant Square.

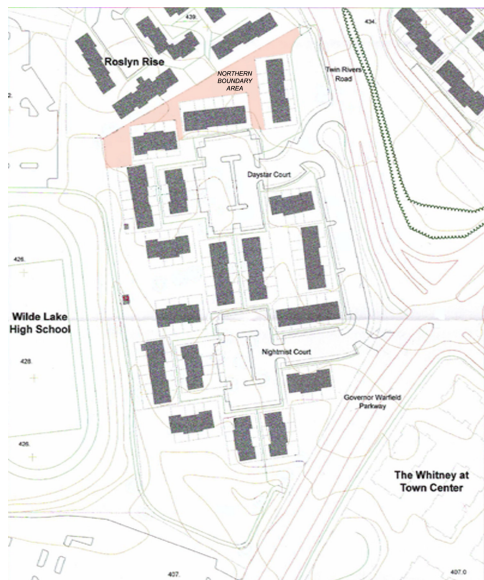
An alternative for this area is to create a community garden with plots (See **Figure 21**) for residents. Install additional plant material to direct pedestrian traffic along trail and deter walk-through traffic into Bryant Square.



Figure 21: Example of a Community Garden

Screen the walkway, adjacent to Daystar unit 10320, with additional evergreens to deter walk-through traffic from the high school into Bryant Square.





**Figure 22: Key Map
Northern Boundary Area**

3.5 Northern Boundary Area

Figure 22 shows the Northern Boundary Area. To prevent continued erosion of soil and off-site pedestrian usage from using Roslyn Rise and Bryant Square as a short cut to other areas of Columbia, it is recommended that a physical barrier be erected between the two properties. A fence has been proposed along the property boundary and agreed to by both Roslyn Rise and Bryant Square according to representation of Bryant Square. One option is to install a 6-foot high fence along the property line that would extend toward Twin Rivers Road on the east and to the just beyond the townhouse on the west (See **Figure 23**).

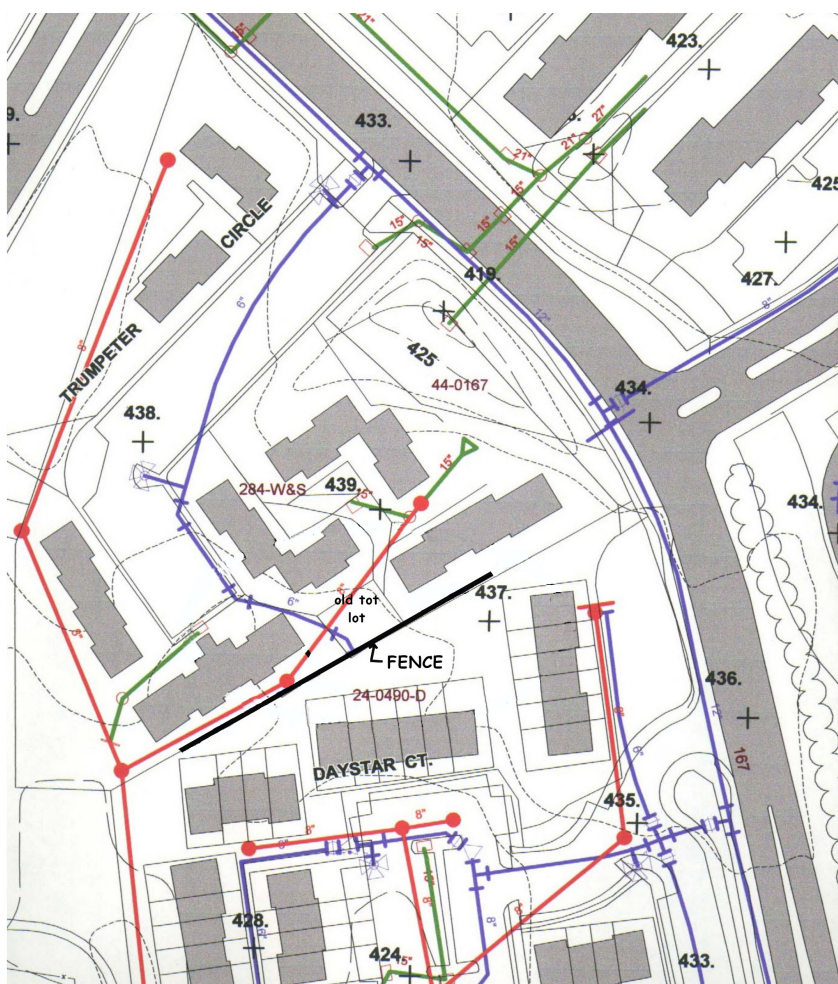


Figure 23: Fence Option Located Along Property Line



An alternative recommendation is to install a 6-foot high fence between the two Roslyn Rise townhouse blocks backing the property line between Roslyn Rise and Bryant Square (See **Figure 24**). The existing site conditions indicate that pedestrians are traveling in a north-south direction between the two complexes and around units 10294 and 10304 and into the Daystar Court parking area.

There is no indication that pedestrians are traveling east to west along the shared property boundary to the extent of creating worn paths. By attaching the fence to the existing private property fences of Roslyn Rise, pedestrian walk-through traffic would be re-directed north of the property onto existing public sidewalks. Additional evergreen plantings at the east and west end of this area, will create the illusion that the fence prevents any through-access, and will help redirect this unwanted traffic.

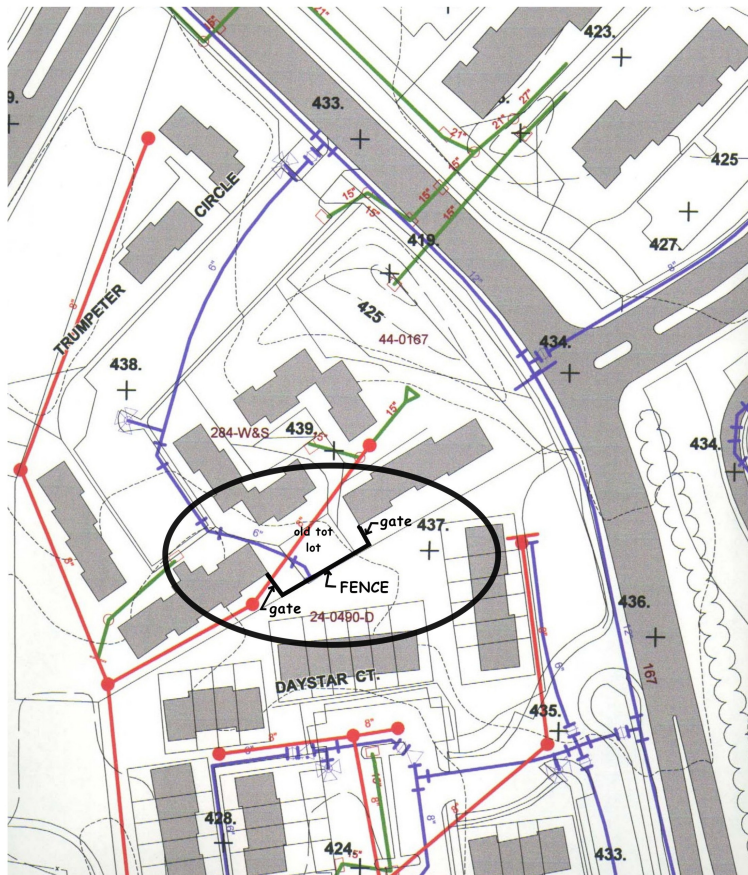
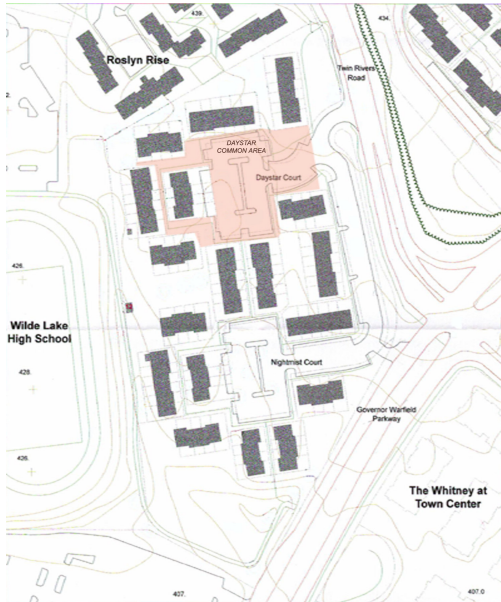


Figure 24: Fence Option Two-Enclosing Common Area Between Roslyn Rise Townhouses



Remove and replace the Austrian Pines as they are near the end of their useful life span and are susceptible to pests and disease as they decline. Regrade this area to direct runoff away from private property and toward the west property boundary. Install Best Management Practices (BMP's) for infiltration of roof downspouts and drainage swales. Remove the debris pile and regrade the area to direct runoff toward the low areas on the west side of the property. Coordinate regrading with private residence (unit 10316 Daystar Court). Coordinate utility box maintenance with cable and other utility companies to monitor and maintain cable connections and bury exposed cable when necessary. Regrade the area disturbed and seed with a semi-shade tolerant grass to reestablish the turf and stabilize the soil.



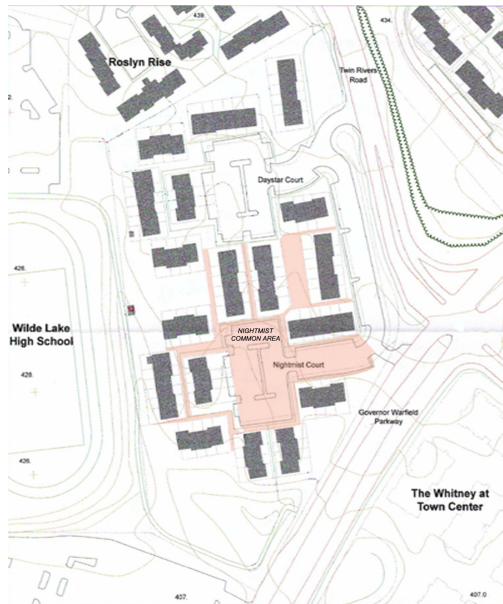
**Figure 25: Key Map
Daystar Court Area**

3.6 Daystar Court Area

Figure 25 shows the Daystar Court Area. Remove the temporary fence adjacent to Daystar Court unit 10309. Remove the overgrown Juniper and replant shrub bed to direct pedestrians to concrete walkway. Replace or repair wooden retaining wall adjacent to units 10285 and 10305 respectively that appears to be overturning. Replace the concrete sidewalk where settling as necessary between Daystar Court units 10310 and 10315. Fill-in low spots in lawn areas and overseed with a shade tolerant grass seed mix.

Remove grass areas and install concrete paving to match existing condition in front of Daystar Court unit 10314. Clean storm drain inlets of debris. Reshape slope between Daystar Court units 10301 and 10309 to decrease runoff velocity. Spread 4 inches of topsoil and plant area with shade tolerant grass seed mix.





**Figure 26: Key Map
Nightmist Court Area**

3.7 Nightmist Court Area

Figure 26 shows the Nightmist Court Area. Clean storm inlets and piping of dirt and debris. Replace concrete walk in front of Nightmist Court unit 10305. Fill low spots to direct runoff toward roadway. Between Nightmist Court units 10331 and 10327, remove and replace wooden steps and walkway remove at least a portion of the existing privacy fence, retaining wall, boardwalk and riprap, install new retaining wall at 10327, and stabilize slope by regarding and place new soil and sod. Regrade slope to direct runoff toward new yard inlet or french drain. Spread 4" topsoil and seed with a shade tolerant grass mix.

Install BMP's between Nightmist Court units 10294 and 10300 for infiltration of roof downspouts and drainage swales. Regrade area and fill eroded gullies. Seed with a shade tolerant grass mix. Install BMP's for infiltration of roof downspouts. Overseed with a shade tolerant grass mix. Regrade area behind Nightmist Court units 10284 and 10294 to decrease runoff velocity. Overseed area with a shade tolerant grass mix. Regrade area behind retaining wall adjacent to Nightmist Court units 10310 and 10314 to decrease runoff velocity. Overseed area with semi-shade tolerant grass seed mix for slope stabilization.

3.8 Parking Areas - Daystar Court and Nightmist Court

Figures 25 and 26 show the parking area of Daystar Court and Nightmist Court. Clean debris from storm drain inlets annually to prevent runoff from ponding. Howard County installed new paving on public roads in May 2003. Replace curb and gutter as required. Remove the concrete wheel stops and repaint fire lane markings. Re-orient and install street and parking signs with a consistent design and size. Regrade the planter areas around the parking areas and seed with a full-sun tolerant grass mix.



Figure 27: 4" X 4" Tile Pattern

An alternative is to remove the existing Hot Mix Asphalt (HMA) within each center parking island and replace with colored stamped concrete. A 4"x4" tile pattern (See **Figure 27**) in a medium gray color for the parking stalls and a single row of 4"x4" tile in a cream or light gray color (See **Figure 28**) for the stall striping is recommended. See **Figure 29** for the plan view and **Figure 30** for the section.





Figure 28: Color Palette

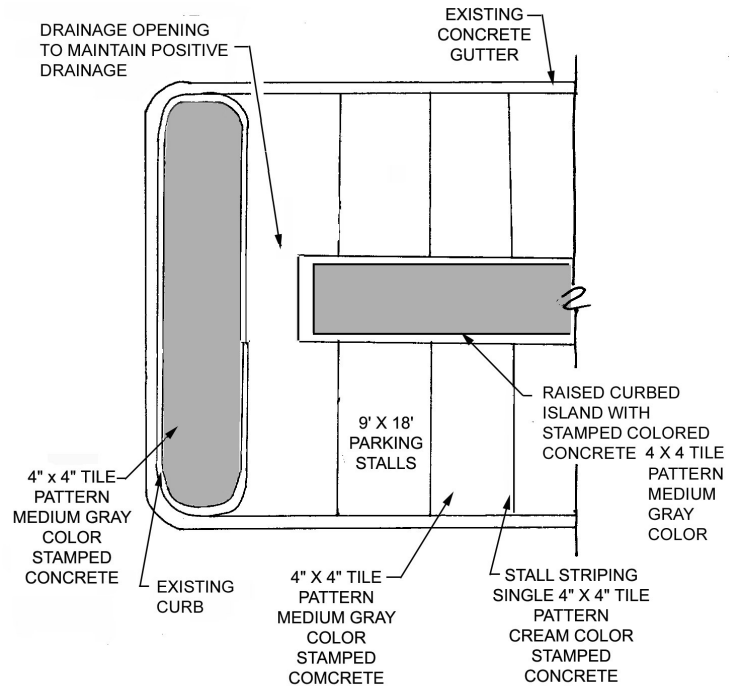


Figure 29: Alternative Parking Island Design for Daystar and Nightmist Court, Plan View

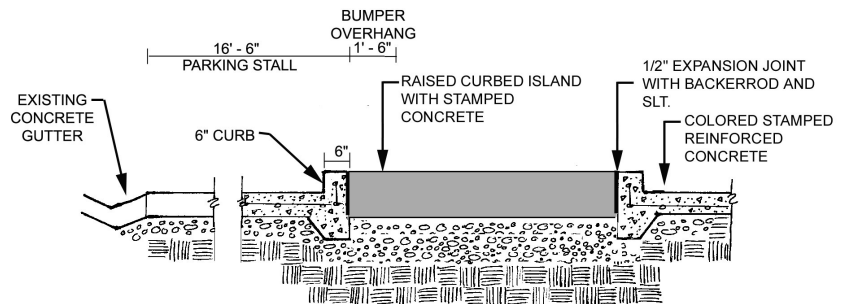


Figure 30: Alternative Parking Island Design for Daystar and Nightmist Court, Section



4.0 FUTURE RECOMMENDATIONS

4.1 Utility As-built Drawing

Beginning in January 2003 BG&E began replacing the pedestrian lighting throughout the complex including the placement of new conduit between light poles. It is recommended that Bryant Square request “As-Built” drawings from BG&E, if available, showing the locations of the conduits and light poles. This information is important for future design and maintenance of Bryant Square.

4.2 Contact Information

Point of contact information between the Bryant Square Home Owners Association and the various local and county agencies, utility companies, and adjacent property owners which may need to be involved in maintenance and collaborative efforts to revitalize and maintain Bryant Square should be maintained. This includes contact person's name, mailing address, phone numbers, email and Internet addresses. **Appendix A** provides a listing of contact information current as of May 15, 2003.

4.3 Drainage and Settling Issues

The Bryant Square HOA is concerned about excessive runoff, ponding, settling, and erosion around Nightmist Court units 10327 to 10321 and units 10311 to 10317. Evidence of these problems include:

- Wooden steps undermined adjacent to unit 10327
- Eroded slope behind unit 10327
- Water meter settling and water ponding in the courtyard
- Eroded slope behind units 10311 to 10317

The townhouses in this area appear to be constructed on fill material. Individual homeowners have reported excessive water bills and walls perhaps indicating broken water lines, and foundation issues.



Determining the exact cause for the reported problems is beyond the scope of this plan. The recommendations proposed in this plan address surface conditions contributing to the drainage issues.

This issue may warrant further investigation of subsurface and related surface issues in order to obtain further costs and design information, which may go beyond the drainage issues discussed in this plan.



5.0 PLANT MATERIAL

5.1 Plant Removal

There are many reasons to remove a species of plants from the landscape, including plants which are diseased, damaged, at the end of their useful life span, and are invasive plants. The landscape at Bryant Square has several plant types that fit the removal criteria. It is recommended that the Bryant Square Homeowners Association and individual property owners secure permission for removal of mature trees fitting these criteria.

5.1.1 End of Useful Life Cycle

Austrian Pine (**See Figure 31**) is planted throughout the site. This pine does not age well, tends to naturally lose its lower limbs, and is susceptible to Diplodia, a twig blight, that can eventually kill the tree. The trees at Bryant Square exhibit both conditions and it is recommended that all Austrian Pine be removed and replaced with alternative evergreen trees.

Flowering Crabapple (**Figure 32**) and Oriental Cherry (**Figure 33**) have a relatively short useful life in the landscape of approximately 30 years, unless meticulously maintained. Both species observed at Bryant Square are at the end of their useful life cycle, and it is recommended that they be removed and replaced with an alternate ornamental tree.



Figure 31: Austrian Pine



Figure 32: Flowering Crabapple



Figure 33: Oriental Cherry



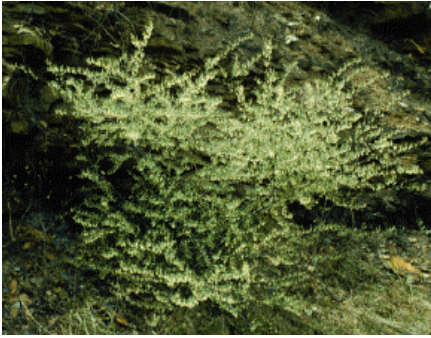


Figure 34: Autumn Olive



Figure 35: Burning Bush

5.1.2 Invasive Plant Management

Invasive plants are plant species that are not indigenous to the area where they are growing. Some are exotic species and some are native to the United States but are now distributed outside their natural range. Invasive plants are pests because they displace native species and can change the structure and composition of natural communities. They lack the competitors, diseases, and herbivores that help control their populations in their native land. Hundreds of invasive plants occur in the wild in Maryland. Most plants used in horticulture are not native to Maryland, and many can escape into the wild. However, most invasive species do not pose a serious threat to native vegetation in undisturbed areas. The following invasive plants were found growing at Bryant Square, and should be removed immediately and replaced with appropriate plant material of a similar type and form (i.e. Shade Tree, Evergreen, Ornamental):

Elaeagnus - Autumn Olive species (**Figure 34**), Euonymus alatus – Winged Euonymus or Burning Bush (**Figure 35**) and Fargesia – Running Bamboo (**Figure 36**) and Acer platanoides - Norway Maple (**Figure 37**). Where invasive species exist on private property, the Bryant Square Homeowners Association should encourage residents to replace these species as they improve or re-landscape their yards.

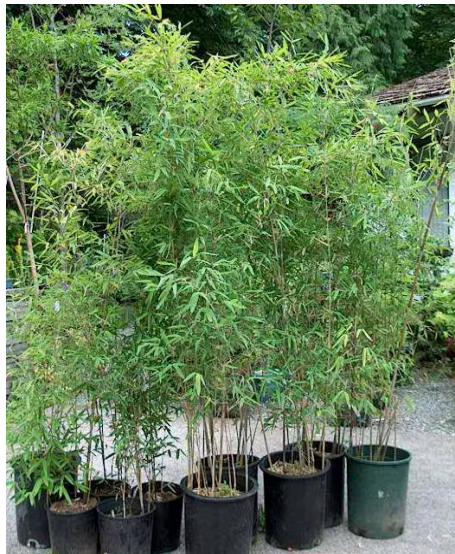


Figure 36: Running Bamboo



Figure 37: Norway Maple



5.2 Landscape Material Inventory

The following inventory of plants was noted in the common areas at Bryant Square. Included with each are the botanical and common name, growth habits, known disease and pest problems, and other general information pertaining to the health and maintenance of the plant.



1. Norway Maple, *Acer platanoides*



Norway Maple

Height:	40' to 75' (45' at age 30)
Width:	30' to 60' (35' at age 30)
Description:	A wide-ranging species in Europe and western Asia that has been planted in many parts of North America. There is much variation in size, shape, and leaf color. Moderate to vigorous grow rate on various site conditions.
Foliage:	4" to 7", green, yellow to brown in fall greenish-yellow
Fruit:	2" samara
Limitations:	Identified as an invasive species in Maryland. Its heavy shade, root toxins, and root competition suppress growth around it.
Pests/Diseases:	Leaf scorch, <i>Verticillium</i> wilt, <i>Ganoderma</i> rot and frost cracks.

2. White Ash, *Fraxinus americana*



White Ash

Height:	50' to 60' (45' at age 30)
Width:	40' to 50' (30' at age 30)
Description:	Selected in Illinois and introduced in 1975. It has a compact, symmetrical crown with even branching and a deep red fall color, without the yellow or green that is common in the species.
Foliage:	Deep wine-red color in early fall maintained until frost
Fruit:	Seedless
Limitations:	Sensitive to drought conditions
Pests/Diseases:	Ash decline or dieback, borers, flower gall, scale insects, sawfly, bark splitting leaf rusts, leaf spots, and cankers





Honeylocust

3. Honeylocust, *Gleditsia triacanthos*

Height:	40' to 80' (50' at age 30)
Width:	40' to 70' (50' at age 30)
Description:	This tree is thorny, has spreading branches, and usually a short trunk. Bark is gray to black, and separated by fissures into plates. Rapid growth rate.
Foliage:	Compound, ½" to 1 ½" leaflets, yellow in fall, leaves fall early
Fruit:	Long brown pods, but few on most cultivars
Limitations:	Intolerant to shade
Pests/Diseases:	Webworm, borer, plant bugs, pod gall midge, spider mite, leaf spot, cankers, and powdery mildew



Sycamore

4. Sycamore, *Platanus occidentalis*

Height:	75' to 100'
Width:	55' to 60'
Description:	Large tree with massive trunk and wide-spreading open crown of massive crooked branches. Smooth, light grayish brown exfoliating bark. Inner layers of bark are white to creamy white.
Foliage:	4" to 9" wide, often broader than long, 3" to 5" lobed with shallow sinuses and broad-triangular lobes. Medium to dark green in Summer; Fall color is tan to brown. Leaves emerge in late Spring.
Fruit:	Multiple, globose fruit of achenes, 4/5" to 1-1/3" diameter, borne singly on a 3" to 6" long peduncle
Limitations:	None serious
Pests/Diseases:	Anthraxnose, leafspots, aphids, Sycamore plant bug, Sycamore tussock moth, scales, bagworms, borers, ad infinitum





Kwanzan Oriental Cherry

5. Kwanzan Oriental Cherry, *Prunus serrulata*

Height:	25' to 35' (30' at age 30)
Width:	20' to 25' (20' at age 30)
Description:	The species is native to Japan, China, and Korea. 'Kwanzan' is the most popular cultivar, made famous by the Washington, D.C. cherry blossom displays. It is also known as 'Sekiyama.'
Foliage:	Emerges reddish copper, turning dark green; orange-brown in fall
Flower:	2 ½" pendulous, double, deep pink blossoms
Fruit:	Fruitless
Limitations:	Limited useful life of 30 years in urban landscape
Pests/Diseases:	Aphids, borers, scales, defoliating insects, and virus diseases

6. Eastern Red Cedar, *Juniperus virginiana*



Eastern Red Cedar

Height:	40' to 50'
Width:	8' to 20'
Description:	Densely pyramidal when young and slightly pendulous in old age
Foliage:	Medium green, sage-green to blue-green in summer often becoming bronze to yellow in winter
Fruit:	Cones globular or ovoid, up to ¼" across, brownish violet
Limitations:	None serious
Pests/Diseases:	Cedar apple rust and bagworms





Austrian Pine

7. Austrian Pine, *Pinus nigra*

Height:	50' to 60'
Width:	20' to 40'
Description:	Densely pyramidal when young becoming a large, broad, flat-topped tree with a rough, short trunk and low, stout, spreading branches.
Foliage:	Dark green
Flowers:	Staminate clustered, yellow; pistillate yellow-green
Fruit:	Solitary or in clusters, sub-sessile, ovoid, conical 2 to 3" long, 1 to 1/4" wide before opening
Limitations:	Limited useful life of 25-30 years in urban landscape.
Pests/Diseases:	Diplodia and nematodes

8. Winged Euonymus or Burning Bush, *Euonymus alatus*



Winged Euonymus

Height:	15' to 20'
Width:	15' to 20'
Description:	Medium in leaf: mounded to horizontal, spreading, flat-topped shrub, usually broader than wide.
Foliage:	Flat medium to dark green
Flowers:	Each flower 4-petaled, 1/4" or larger, yellow-green, May to early June
Fruit:	1/4" to 1/3" long red capsule, September through late fall
Limitations:	Identified as an invasive species in Maryland.
Pests/Diseases:	None serious





Manhattan Euonymus

9. Manhattan Euonymus, Euonymus kiautschovicus

Height:	8' to 10'
Width:	8' to 10'
Description:	Semi-evergreen shrub of rounded habit grown for its deep green, lustrous leaves. Plants are excellent for sheared hedges. Excellent foundation plant.
Foliage:	Good dark green in summer, but burns in winter and looks quite unkempt
Flowers:	Greenish white, 4-parted, 1/3" diameter, borne in loose, erect, 1 1/2 to 4" wide cymes in July-August.
Fruit:	Not noticeable
Limitations:	None serious
Pests/Diseases:	Susceptible to scale



Japanese Holly

10. Japanese Holly, Ilex crenata

Height:	5' to 10'
Width:	5' to 10'
Description:	Usually a dense, multi-branched evergreen shrub of rounded or broad rounded outline
Foliage:	Dark green
Flowers:	Dull greenish white with 4 pedals
Fruit:	Berry-like black drupe 1/4" in diameter
Limitations:	None serious
Pests/Diseases:	Spider mites and nematodes





Juniper

11. Chinese Juniper, *Juniperus chinensis*

Height:	50' to 60'
Width:	15' to 20'
Description:	Tree or shrub; most typically and erect narrow, conical tree; sometimes very slender, sometimes bushy; cultivars variable from ground covers to large, wide-spreading shrubs.
Foliage:	Green to blue-green to grayish green
Flowers:	Staminate flowers yellow-brown to orange-yellow
Fruit:	Cones globose or oblong, 1/3 to 1/2" across
Limitations:	Intolerant of shade
Pests/Diseases:	Phomopsis and Kabatina

12. Snowmound, *Spiraea nipponica*



Snowmound

Height:	3' to 5'
Width:	3' to 5'
Description:	Densely branched covered with abundant white flowers
Foliage:	Dark blue-green leaves, 1 to 1 1/2" long, 3/8 to 1/2" wide, toothed at the rounded apex
Flowers:	White flowers in small corymbs appearing in late May into June
Fruit:	None
Limitations:	None serious
Pests/Diseases:	None serious



13. Japanese Yew, *Taxus cuspidata*



Japanese Yew

Height:	10' to 40'
Width:	10' to 40'
Description:	Crown erect or flattened, broad or narrow, of irregular habit and spreading or upright-spreading branches; can be grown as a tree or multi-stemmed shrub.
Foliage:	Dark green above and yellowish green below
Flowers:	Green from the leaf axils, opening in March-April
Fruit:	Seeds ovoid, about 1/3" long by 1/6" broad, compressed, aril red
Limitations:	None serious
Pests/Diseases:	None serious

14. Leatherleaf Viburnum, *Viburnum rhytidophyllum*



Leatherleaf Viburnum

Height:	10' to 15'
Width:	10' to 15'
Description:	Upright, strongly multi-stemmed shrub.
Foliage:	Dark leathery green
Flowers:	Yellowish white, mid-May, 4 to 8" in diameter
Fruit:	Drupe, oval, 1/3" long, red changing to black
Limitations:	None serious
Pests/Diseases:	None serious



6.0 BEST MANAGEMENT PRACTICES FOR RUNOFF

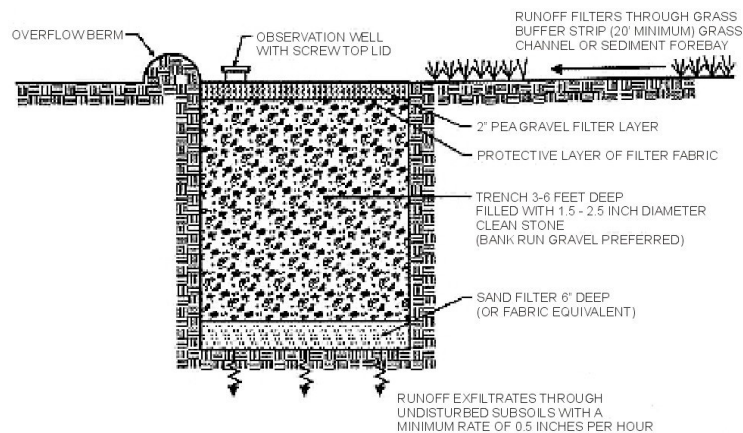
Best Management Practices (BMP's) for runoff refers to a series of practices that are designed to treat runoff on the property. The primary purpose of BMP's is to manage rooftop runoff and impervious pavement runoff. There are three primary categories: Infiltration, Diversion, and Storage.

6.1 Infiltration

Structures are installed on the site to infiltrate runoff and to facilitate percolation through the subsoil. Examples of infiltration structures for Bryant Square include an infiltration trench, an infiltration gallery, and a dry well.

6.1.1 Infiltration Trench

An infiltration trench is a long trench with a perforated pipe within a gravel guard to distribute runoff throughout the length of the trench (See **Figure 38**). Infiltration trenches are often used to capture runoff from roof drains and downspouts. The primary benefits of an infiltration trench are that the trench allows runoff to infiltrate into the subsoil thereby decreasing the velocity and volume of runoff flowing over the ground, which reduces erosion.



A SCHEMATIC OF AN INFILTRATION TRENCH (Source: MDE, 2000)

Figure 38: Infiltration Trench



6.1.2 Infiltration Gallery

An infiltration gallery (See **Figure 39**) is designed to deliver captured runoff to the subsoil through subsurface reservoirs composed of gravel. These structures are below grade (do not see them) and provide an innovative stormwater treatment in areas where space is limited.

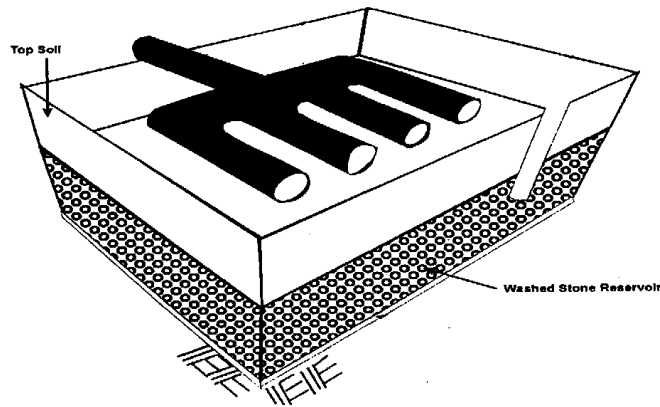


Figure 2 - Typical Infiltration Gallery – Source: Metropolitan Washington Council of Governments, 1987

Figure 39: Infiltration Gallery

6.1.3 Dry Wells

Dry wells are stone or gravel pits (See **Figure 40**) used to infiltrate runoff from impervious surfaces (parking lots for example). Typically several shallow dry wells are installed, as they are more effective than a single large deep well. Often french drains are used as a dry well.

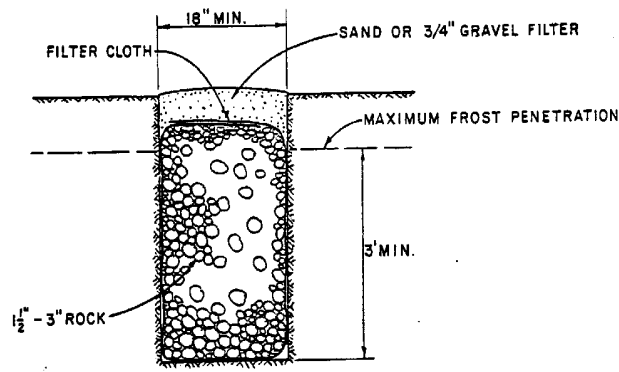


Figure 3 – Typical Dry Well – Source: TRPA Handbook of Best Management Practices, 1988

Figure 40: Dry Well



6.2 Diversion

Diversion uses site grading, channels, and berms to direct runoff to a designated area where the runoff can infiltrate into the subsoil. Typically, grasses swales, bioretention facilities, and filter strips are used to direct, collect, and allow infiltration within a site. Bryant Square currently has several grassed swales directing runoff toward a central outfall located in the Southern Boundary Area. From there the runoff leaves the property through the Columbia stormwater drainage system.

6.3 Grass and Vegetated Swales

Grass and vegetated swales reduce runoff velocity and increase infiltration of sediments. Compared to roadside ditches, they have a wider bottom, gentler slopes and denser vegetation. Grass and vegetated swales are good for smaller drainage areas with mildly sloping topography.

Dry Swales are engineered grass channels that provide full treatment of runoff. Dry swales are good for smaller drainage areas with mildly sloping topography. A layer of prepared sandy loam is topped by dense turf. The treated runoff is collected in an underdrain pipe system and discharged off-site. Dry swales are designed to dewater a few hours after a storm.

6.4 Bioretention

Bioretention systems use filtration to treat runoff (See **Figure 41**). These systems are modeled after the biological and physical characteristics of a natural ecosystem. Runoff is directed through swales, overland flow, and other devices into the bioretention area.





Figure 41: Example of a Bioretention System



Figure 42: Example of a Rain Garden

Since it models natural environments with trees, shrubs, grasses, and flowers, the Bioretention area often becomes a site amenity.

One such amenity is often called a rain garden (see **Figure 42**). Rain gardens are shallow depressions designed to collect rain, typically from impervious surfaces such as roofs and parking and allow plants, bacteria, and soils clean the water as it seeps its way into the ground. The site for the rain garden should be placed strategically to intercept water runoff. The first flush of runoff is ponded in the depression of the rain garden and over a short period of time the water infiltrates into the subsoil.



6.5 Storage and Release

Storage includes practices that hold rooftop runoff for use by the individual homeowner or slowly release it for capture in an infiltration or diversion structure. Examples of storage systems include cisterns and rain barrels (see **Figure 43**) are the simplest in design of all the on-lot treatment systems. They are available commercially and can be applied in a wide variety of site conditions.



A rain barrel is used to collect rooftop runoff

Figure 43: Example of a Rain Barrel

Using a downspout disconnect system redirects rooftop runoff into infiltration trenches, grass swales, bioretention areas, rain gardens or to store in rain barrels or cisterns. One major advantage of this system is that it transports water away from the foundation of the townhouse. Existing roof drains are directed to the appropriate runoff conveyance to reduce the volume and velocity of runoff directly behind the property fences.

6.6 Selecting BMP's

Selecting the Best Management Practices appropriate for connect specific site conditions identified at Bryant Square should be done by a qualified professional during the design and development of the landscape master plan.



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<http://www.raingardens.org/>

http://www.vdof.org/rfb/riparian/rain_gardens.htm



Howard County Government Resources:

Department of Housing and Community Development (Keeping Our Neighborhoods Beautiful: A Property Maintenance Handbook for Residents and Community Associations-Second Edition)

6751 Columbia Gateway Drive, 3rd Floor
Columbia, MD 21046

410-313-6318

www.co.ho.md.us

Howard County Department of Planning and Zoning

3430 Court House Drive

Ellicott City, MD 21043

410-313-2350

www.co.ho.md.us

Department of Public Works

3430 Court House Drive

Ellicott City, MD 21043

410-313-4400

www.co.ho.md.us

After Hour emergencies

410-313-2929

Environmental Services

410-313-6444

Highways

410-313-7450

Utilities

410-313-4900

Department of Recreation and Parks

7120 Oakland Mills Road

Columbia, MD 21046

410-313-7275

www.co.ho.md.us

Parks and Program Services

410-313-4640

Natural Resources & Land Management

410-313-4730

Soil Conservation District

708 Libson Center, Suite E

Woodbine, MD

410-489-7987

County Council Office

3430 Court House Drive

Ellicott City, MD 21043

410-313-2001

www.co.ho.md.us

Columbia Resources:

Columbia Association

Welcome Center

The Columbia Association Building

10221 Wincopin Circle

Columbia, MD 21044

410-715-3000

www.columbiaassociation.com

Dorsey Search

Linden Hall

4675 Dorsey Hall Drive

Ellicott City, MD 21042

410-730-4005

www.columbiavillages.org/dorseysearch/

Harper's Choice

Kahler Hall

5440 Old Tucker Row

Columbia, MD 21044

410-730-0770

www.columbiavillages.org/harperschoice/

Hickory Ridge

The Hawthorn Center

6175 Sunny Spring

Columbia, MD 21044

410-730-7327

www.columbiavillages.org/hickoryridge/

Kings Contrivance

Amherst House

7251 Eden Brook Drive

Columbia, MD 21046

410-730-8113

www.columbiavillages.org/kingscontrivance

Long Reach

8775 Cloudleap Court
Columbia, MD 21045
410-730-8113
www.longreach.org/

Oakland Mills

The Other Barn
5851 Robert Oliver Place
Columbia, MD 21045
410-730-4610
www.columbiavillages.org/oaklandmills/

Owen Brown

6800 Cradlerock Way
Columbia, MD 21045
410-381-0202
www.columbiavillages.org/owenbrown/

River Hill

6020 Daybreak Circle
Clarksville, MD 21029
410-531-1749
www.columbiavillages.org/riverhill/

Town Center

5430 Vantage Point Road
Columbia, MD 21044
410-730-4744
www.columbiavillages.org/towncenter/

Wilde Lake

Slayton House
Wilde Lake Village Green
Columbia, MD 21044
410-730-3987
www.columbiavillages.org/wildelake

Other Resources:**Howard County Cooperative Extension**

3525-L Elliott Mills Drive
Ellicott City, MD 21043
410-313-2707
www.agnr.umd.edu/Howard/index/cfm

Home and Garden Information

800-342-2507
www.agnr.umd.edu/users/hgic

Howard County Master Gardeners

Howard County Master Gardeners,
c/o Howard County Cooperative Extension
3525 Ellicott Mills Drive
Ellicott City, MD 21043
410-313-2707
www.agnr.umd.edu/howard/mg